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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,972	01/22/2002	Richard D. Newberry	5004-23-1	5202

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EXAMINER

COCKS, JOSIAH C

ART UNIT PAPER NUMBER

3743

DATE MAILED: 10/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/053,972

Applicant(s)

NEWBERRY, RICHARD D.

Examiner

Josiah C. Cocks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings filed with the application on 1/22/02 appear informal. The reference characters are handwritten and in some cases are difficult to read. The text in the shaded boxes of Fig. 1 is also difficult to read. These drawings are acceptable for examination but formal drawings will be required when the application is allowed.

### *Priority*

2. Applicant's claim for domestic priority under 35 U.S.C. § 119(e) is acknowledged.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Drasek et al.* (US # 5,829,962) in view of *Newberry* (US # 5,277,575).

*Drasek et al.* disclose in Figures 1-15 a control system for a heating system and method of controlling a heating system similar to that described in applicant's claims 1-41 including at least one sensor (10) that is positioned adjacent to a combustion flame source in the combustion

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chamber and monitors the intensity of emitted flame radiation (see col. 6, lines 15-41). The sensor of may monitor ultraviolet (UV) emissions (see col. 3, lines 51-56). *Drasek et al.* further shows a monitoring circuit in the form of optical processor (12) that includes an analog/digital converter and functions to convert an analog signal indicative of the flame quality into a digital signal that is sent to a micro-controller control system (16), which may be used to control, among other things, the fuel valve (20). It would be inherent in the disclosure of *Drasek et al.* that an igniter would be positioned to ignite the burner flame.

In regard to the claims specifying a specific range of UV light frequencies, it would be simply a matter of engineering design choice to select the frequencies specified.

*Drasek et al.* does not disclose the use of thermostat, air blower and fuel pump.

*Newberry* teaches a control system and method in the same field of endeavor as *Drasek et al.* wherein the system of *Newberry* includes a thermostat (110), and a motor (106) that includes an air blower and fuel pump (106 see col. 3, lines 50-53) and an igniter (104). *Newberry* further discloses that a flame sensor (120) functions as safety device for shutting off the igniter and motor in the event of a sensed unsafe condition (see col. 6, line 57 through col. 7, line 13).

Therefore, in regard to claims 1-12 and 26-30, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of *Drasek et al.* to incorporate a thermostat, air blower, and fuel pump responsive to a flame sensor such as taught by *Newberry* as these components are well known in the art for controlling the heat output of a heating device and their response to a signal from a flame sensor serves to prevent unsafe conditions (see *Newberry*, col. 1, line 61 though col. 2, line 14).

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5. Claims 13-25 and 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Drasek et al.* in view of *Newberry* as applied to claims 1-12 and 26-30 above, and further in view of *Wild et al.* (US # 5,549,469).

*Drasek et al.* in view of *Newberry* disclose all the limitations of claims 13-25 and 31-41 except for the use of means for transmitting the signals to a remote processor via a global communications network and specifically the use of a modem.

*Wild et al.* teach a burner control system in the same field of endeavor as *Drasek et al.* wherein the system of *Wild et al.* includes the use of ultraviolet flame sensor circuitry (91) generating a signal which is transmitted to a processor via a communications module (58) that allows communication with remote terminals and displays (see col. 5, line 61 through col. 6, line 4). These communications allow for downloading of status information, updating of software information and other features.

In regard to the limitation of the use of a modem and that the modem includes a hybrid DAA circuit, it would be simply a matter of engineering design choice to select a suitable transmitting means to convey the information to a remote location.

Therefore, in regard to claims 13-25 and 31-41, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of *Drasek et al.* to include the remote transmitting means of *Wild et al.* for the desirable purpose of being able to convey system information for review and control system operations from a remote location.

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***Conclusion***


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Ciammaichella et al.*, *Hosome et al.*, *Myhre et al.*, GB 2 188 416, GB 2 206 204, and GB 2 280 023 are included to further show the state of the art concerning burner control systems.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett, can be reached at (703) 308-0101. The fax phone numbers for this Group are (703) 308-7764 for regular communications and (703) 305-3463 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc  
September 30, 2003

  
JOSIAH COCKS  
PATENT EXAMINER  
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